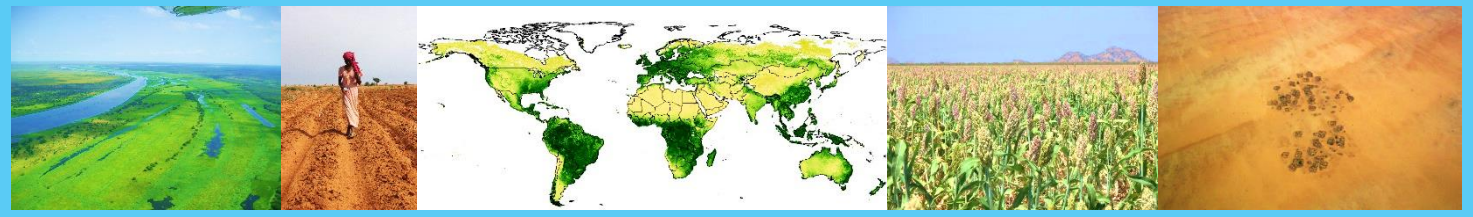


South Sudan: The 2015 Rainfall Seasonal Analysis

December 2015

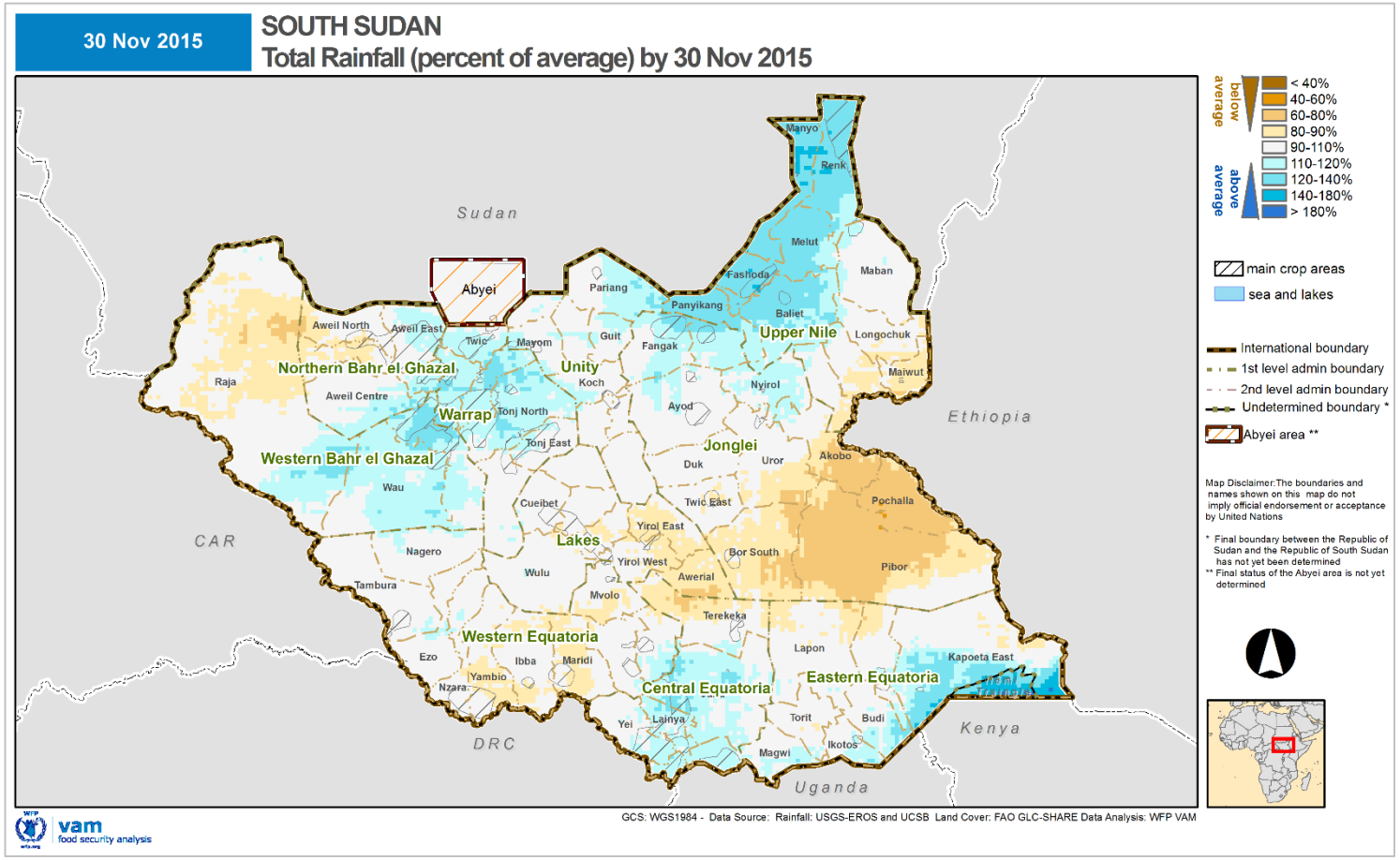
WFP
wfp.org

vam
food security analysis

HIGHLIGHTS

- The rainfall season in South Sudan is now coming to an end, with only southern areas anticipated to receive lighter rains until the start of the next rainfall season around March 2016.
- **Moderately above average seasonal** rainfall was observed in the central, south-eastern and northern parts of the country while **moderately below average rainfall** was observed mostly in southern Jonglei state. Since October, the **continued favourable rain are expected to have positive** impact on the second season crops of the dual cropping areas of Equatoria, after significant mid season drier than average conditions.
- In November, there was **widespread above average rainfall** across central and southern Unity, southern Jonglei, Central and Eastern Equatoria States. Vegetation cover from satellite data is also at much above average levels. This is in line with field report which are indicating the **improvement of crop conditions, and water and pasture condition** for the livestock in the pastoralist areas.
- The Prospects of the **second agriculture seas**on in the Greater Equatoria are moderate to good. So far, **green harvest** of the second agriculture season are on going in bimodal rainfall areas.
- The on-going El Nino event is **now at its peak** and is very likely to extend into the first quarter of 2016. Thus, the recent **above average rainfall** observed in Central and Eastern Equatoria states should continue for a while, providing better prospects for pastoralists.

Overall Seasonal Rainfall Performance



Map 1: *Seasonal cumulative rainfall until end of November 2015, as a percentage of the 20-year average. Hashed pattern indicates main agricultural areas. Brown shades indicate below-average rainfall; blue shades indicate above-average seasonal rainfall.*

Seasonal rainfall performance

Up to end of November, seasonal rainfall was moderately above average in northern parts of the country (Bahr el Ghazal, Warrap and Upper Nile). Little change is expected now since limited or no more rainfall is expected until next season.

The southern half of Jonglei and some parts of Lakes had a drier than average season.

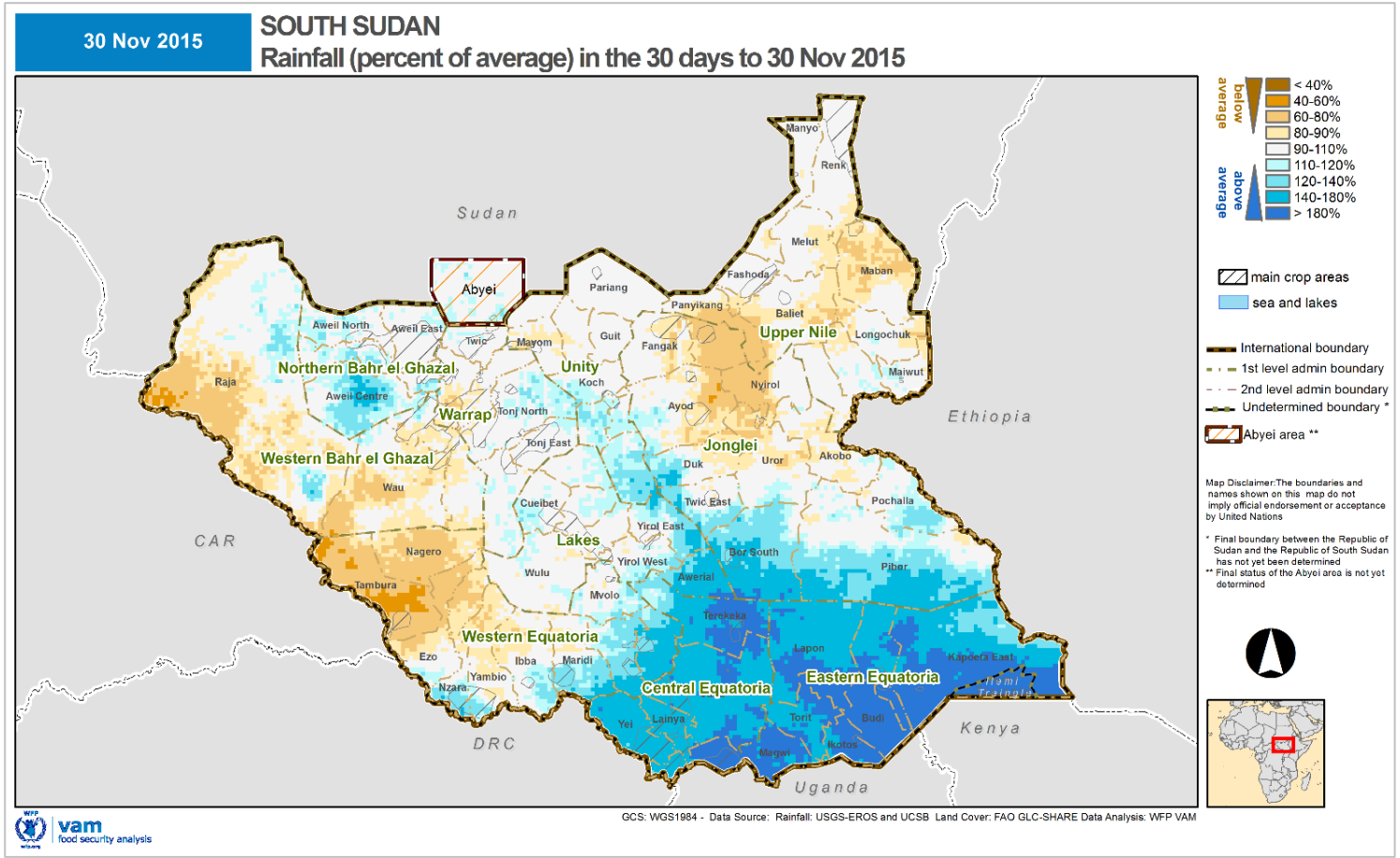
Overall, Central and East Equatoria had an above average rainfall season. This is mostly due to late abundant rainfall which is having a positive impact on the second season crops of the dual cropping areas of Equatorias. This is in line with information from field reports.

However, there was also poor distribution of rainfall as the current favourable rainfall was preceded by drier than average periods (see subsequent explanations).

Timing of the season

The rainfall season of 2015 is now approaching its end and only small amounts are to be expected in the southernmost areas of the country until the new season starts again from about early March onwards.

Recent Rainfall Performance



Map 2: *30 days cumulative rainfall until 30 of November 2015, as a percentage of the 20-year average. Hashed pattern indicates main agricultural areas. Brown shades for below-average rainfall; blue shades for above-average seasonal rainfall.*

Recent Rainfall Patterns

During November, drier than average conditions were registered in Jonglei-Upper Nile and the borders of Bahr-el-Ghazal and Western Equatoria. However, these late season deficits are of little importance as in most of these regions the bulk of the harvest was already completed.

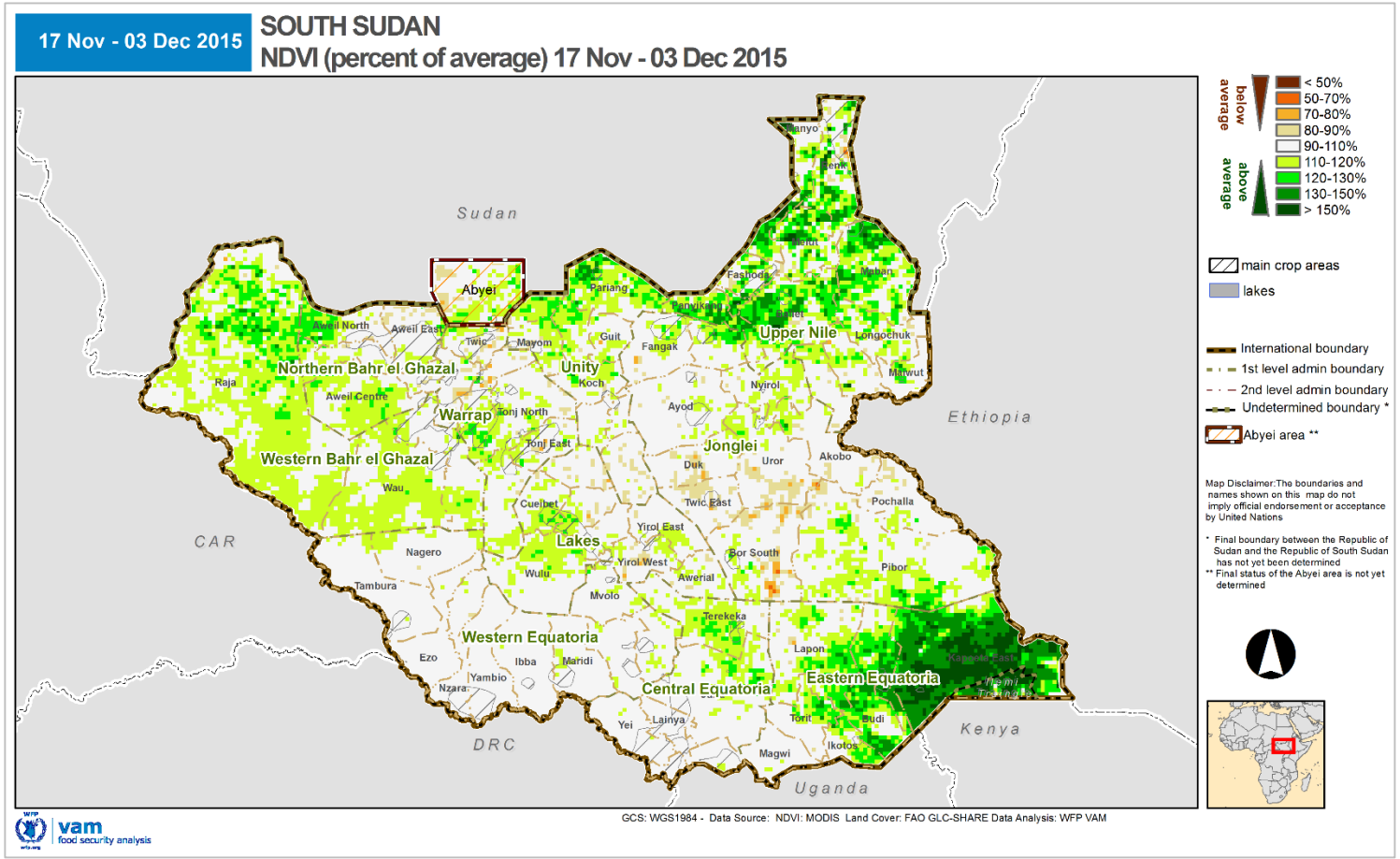
The south of the country in contrast, has enjoyed wetter than average conditions, mainly in Central and East Equatoria, confirming the information from the field. Reports from Eastern Equatoria indicate that better November rains improved crop prospects in Magwi, West Ikotos and Budi, alleviating the effects of drier than average conditions in August and September.

In WBS, harvest of groundnut and bambara nut is completed. Sesame's harvesting and processing is ongoing while the good performance of the long maturing sorghum in most areas of Raja and Wau counties leads to expectations of good yields.

In Central Equatoria, though first season stocks are depleted at household level, some locations have already started harvesting the second season short term crops (maize and groundnut).

In pastoralists areas, the late favourable rainfall resulted in improved water and pasture condition for grazing of animals. The volume of milk also increased. This recovery in rainfall is very important for livestock health, in particular considering the pronouncedly drier than average middle season rainfall (July to September), even if some areas (southern Jonglei) remain in overall seasonal deficit.

Vegetation Status



Map 3: *Late November 2015 Vegetation Index as a percentage of the 12-year average. Hashed pattern indicates main agricultural areas. Orange shades for below-average; green shades for above-average vegetation.*

Vegetation Status

The late abundant rains in Central and East Equatoria have a strong effect in vegetation cover which is now significantly above average levels. Indeed field observation confirms good status of pasture and water availability for livestock in these regions.

In some areas this also brought benefits to the second crops (Magwi and Budi), but in more eastern areas, little recovery was seen and crops were significantly affected by mid season dryness.

After drier than average periods midway through the year, vegetation shows good recovery in Jonglei where below average patterns are still prevalent though already showing signs of return to average levels.

In several states, the main harvest is completed and production is anticipated to have mixed performance compared to last season. In Western Equatoria, the green harvest of maize and groundnuts (second season crop) is ongoing. In addition, reports from Central Equatoria indicate continued availability of second season green harvests in most markets around the state (groundnut, maize and vegetables).

El Nino Event and Seasonal Rainfall Forecast

The El Nino Event of 2015-2016

An El Nino event is officially active since March 2015. It is now at its peak and should start dissipating after the first quarter of 2016.

Historically, El Nino events impact South Sudan, leading to growing season rainfall deficits during the July-September period mostly in more South-East areas.

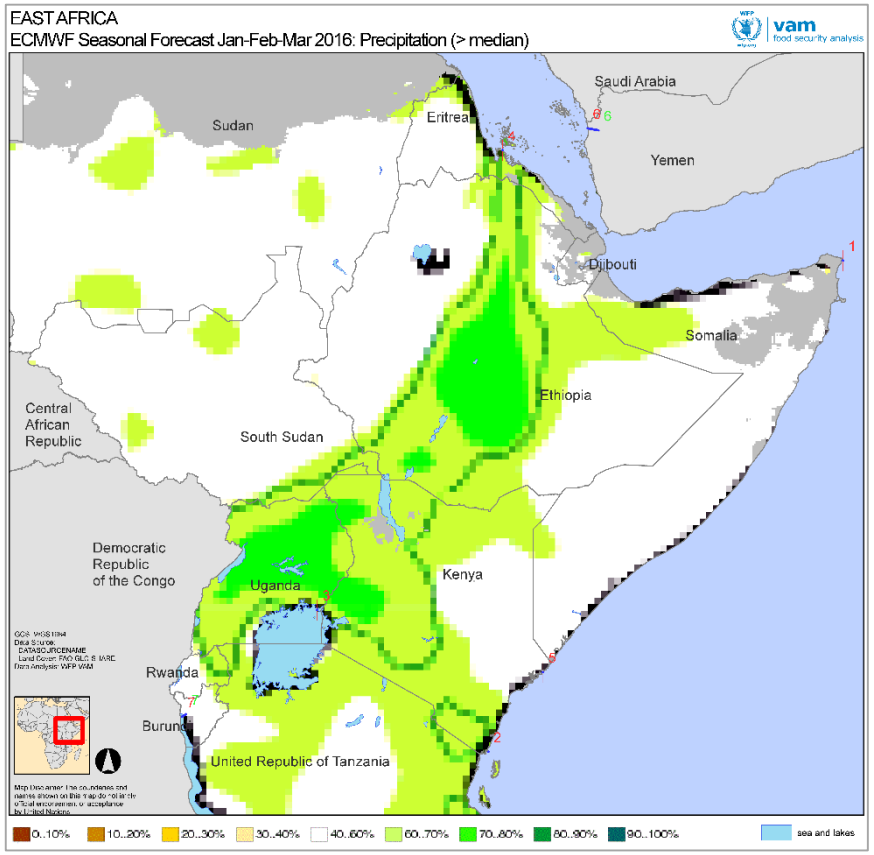
However, these same areas later benefit from wetter than average conditions as a result of the spread of the typical El Nino enhanced rainfall from East Africa. This has been taking place since October, mostly in Central and Eastern Equatoria.

So far this season has conformed to this general pattern quite well.

Rainfall forecasts for January – February 2016

Forecasts from ECMWF (January to March 2016) indicate normal rainfall for South Sudan.

In practice, there will only be significant rainfall in Eastern Equatoria, specially in border areas with Kenya and Uganda as a result of the El Nino enhanced rainfall in East Africa. This will continue to benefit late planted and second crops and importantly will provide good perspectives for pastoralists in these regions.



ECMWF forecast for January – March 2016 rainfall.
Green shades = wetter than average conditions more likely. Brown shades = drier than average conditions more likely

Data Sources:

Rainfall: CHIRPS, Climate Hazards Group, UCSB

Vegetation: MODIS NDVI, EOSDIS-NASA

Land Cover: FAO GLC-Share

Processing:

VAM software components, ArcGIS

For more information, please contact:

Raul Cumba (VAM South Sudan) - raul.cumba@wfp.org +211 920002729

Rogerio Bonifacio (VAM HQ) - rogerio.bonifacio@wfp.org +39 06 6513 3917

WFP wfp.org | vam food security analysis